

MISSOURI DEPARTMENT OF CONSERVATION



February/March 2011

Xplor

kids' adventures in nature

W-ELK-OME
HOME!

ELK ARE HOOFIN' IT BACK
TO THE SHOW-ME STATE

COVER STORIES



Turkey vulture

ON THE COVER



BULL ELK

photo by Noppadol Paothong



Vulture Culture

They're not just foul fowl with disgusting diets.



Something to Bugle About

Elk return to the Show-Me State.

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Xplor

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ON THE WEB

Visit www.xplormo.org for cool videos, sounds, photos, fun facts and more!

We recycle. You can, too!
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PHOTOS

with Nop & Dave



Cranky Snake

photo by Noppadol Paothong



Nop Paothong lay belly-down on the forest floor, trying hard not to irritate the large and quite venomous cottonmouth coiled 3 feet in front of him. It was mid-March, and the bluff overlooking Mingo National Wildlife Refuge was slithering with enough snakes to film an Indiana Jones movie.

Most snakes flee when humans creep too close. Western cottonmouths, also called water moccasins, often hold their ground. When scared, they spread their jaws to expose the cotton-white lining of their mouths. This behavior, called gaping, is a way to say, "Don't mess with me."

When Nop saw the snake in front of him gape, he shot several quick photos. Nop's sudden movement made the snake strike. It was a bluff—the snake barely moved—but Nop still flinched.

This cranky attitude gives cottonmouths a bad rap for being aggressive. Although Nop doesn't advise getting close to a cottonmouth, he says nothing could be further from the truth.

"Cottonmouths don't want to waste venom on something they can't eat," Nop says. "They're well-equipped to defend themselves, but they just want to be left alone."

For more of Nop's photos, visit www.xplormo.org/node/11271.

you discover

With winter almost gone and spring right around the corner, there's plenty for you to discover outside in February and March. Here are a few ideas to get you started.

Build butterfly BOMBS.

Butterfly bombs are little balls made of soil, clay and wildflower seeds. You toss the bombs wherever you want a butterfly garden to grow. Rain will melt the clay and wash the seeds into the ground. In a few months, you'll have an explosion of wildflowers perfect for any butterflies that flutter by. For a butterfly bomb recipe, blast over to www.xplormo.org/node/11269.



Surprise a FURRY GLIDER.

Flying squirrels are fairly common throughout Missouri, but no one ever sees them. Why? Because these furry gliders only come out at night. To see flying squirrels, place a bird feeder filled with seed on a tree so that the light from your porch will reach it. After dark, wait quietly by the window and listen carefully. When you hear a soft *whump* or some musical squeaks, flip on the light to reveal your visitor.



Southern flying squirrel

CATCH A COURTSHIP.

From February through March, chubby brown birds called woodcocks perform amazing dances to attract mates—and they do them in midair! To see a sky dance, head to a wet pasture, woodland or cemetery at sundown and listen for a male woodcock's call: *peent*. When the *peenting* stops, scan the sky. You might see the lovestruck male spiraling high into the air. This is just the start of his dance. To learn about his big finish, boogie over to www.xplormo.org/node/11266.



American woodcock

Make a hiking stick.

March offers prime-time hiking weather. Before you hit the trail, find yourself a hiking stick. Choose a straight, sturdy branch that reaches from your nose to the ground. Hickory, oak and cedar branches work well, but don't cut them off living trees. For tips on crafting and using your hiking stick, ramble over to www.xplormo.org/node/11267.



Pattern your shotgun.

Youth turkey season, which runs April 9–10, will be here before you know it. Make sure you're ready by taking time to pattern your shotgun. Patterning, or shooting at paper targets, will reveal whether you're really shooting where you think you are. It also will help you learn how far you can shoot at a turkey to pull off a quick, clean kill. For patterning instructions and to download a turkey target, visit www.xplormo.org/node/3464.



UNLEASH your inner SQUIRREL.

Warm March days are perfect for climbing trees. Since leaves haven't popped out yet, you'll have clear, squirrel's-eye views of the world below. To stay safe as you shinny up, follow the three-point rule: Move only one of your hands or feet at a time. Leave the other three anchored on branches to maintain balance and support your weight. For more tree-climbing tips, branch out to www.xplormo.org/node/11265.



Go trout fishing.

Early spring makes a trout angler's taste buds turn cartwheels. Through winter, Missouri's trout parks and most city lakes require you to return any trout you catch to the water unharmed—you can't take them home to eat. Beginning February 1, however, city lakes allow you to keep your yummy catch, and trout parks follow suit on March 1. Find trout-filled waters and learn the rules of trout fishing at www.mdc.mo.gov/node/5720.



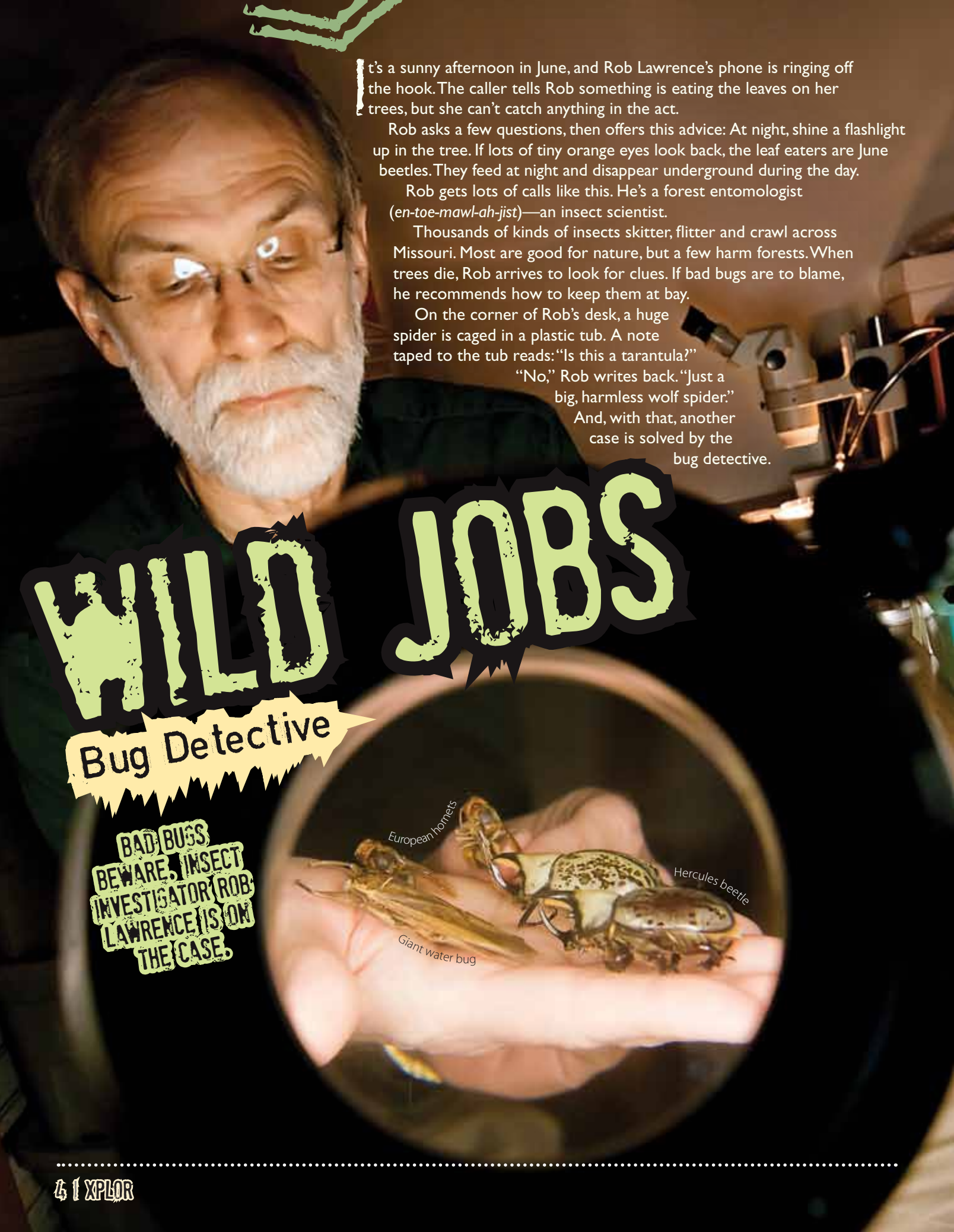
SEARCH for sheds.



Deer season may be over, but you still have time to bag a nice rack of antlers. There's just one hitch: They won't be attached to a deer. In Missouri, most white-tailed bucks drop their antlers from late December through February. A buck's loss can be your gain. Search for shed antlers on south-facing hillsides, crop fields and brushy stream banks. For more pointers on finding antlers, visit www.xplormo.org/node/11268.

Looking for more ways to have fun outside? Find out about Discover Nature programs in your area at www.xplormo.org/xplor/stuff-do/all-events.

MDC
DISCOVER
Nature



It's a sunny afternoon in June, and Rob Lawrence's phone is ringing off the hook. The caller tells Rob something is eating the leaves on her trees, but she can't catch anything in the act.

Rob asks a few questions, then offers this advice: At night, shine a flashlight up in the tree. If lots of tiny orange eyes look back, the leaf eaters are June beetles. They feed at night and disappear underground during the day.

Rob gets lots of calls like this. He's a forest entomologist (*en-toe-mawl-ah-jist*)—an insect scientist.

Thousands of kinds of insects skitter, flitter and crawl across Missouri. Most are good for nature, but a few harm forests. When trees die, Rob arrives to look for clues. If bad bugs are to blame, he recommends how to keep them at bay.

On the corner of Rob's desk, a huge spider is caged in a plastic tub. A note taped to the tub reads: "Is this a tarantula?"

"No," Rob writes back. "Just a big, harmless wolf spider."

And, with that, another case is solved by the bug detective.

WILD JOBS

Bug Detective

BAD BUGS
BEWARE, INSECT
INVESTIGATOR ROB
LAWRENCE IS ON
THE CASE.

European hornets

Giant water bug

Hercules beetle

Yuck!

YOUR GUIDE
TO ALL THE
NASTY,
STINKY,
SLIMY AND
GROSS
STUFF THAT
NATURE HAS
TO OFFER

MOSQUITO LARVAE

Mosquitoes start life as tiny, football-shaped eggs laid in water. The eggs hatch into baby mosquitoes called larvae or wigglers. Wigglers breathe through their behinds, sucking air from the water's surface with a snorkel-like tube. When wigglers grow up, air isn't the only thing they'll suck. Both male and female mosquitoes suck plant juices for food, and females must suck blood before they can lay eggs.

If you see a tangle of branches the size of a small car up in a tree, it's likely a bald eagle nest. Eagles stick with the same mate throughout life. The first nest an eagle couple builds is relatively small. Each year, however, the eagles add more sticks to their old nest. After several years, the nest can become ginormous. Biologists found a nest in Florida that measured 10 feet across, 20 feet tall and weighed more than 4,000 pounds!

Strange BUT TRUE

Eagle nest

Baby bald eagle

..WHAT IS IT?

DON'T KNOW?
Jump to Page 17 to find out.



I boom but don't explode.

I carry two sacks but never go shopping.

I strut my stuff to pick up chicks.

Who are you calling chicken?

MAY

OUTDOOR

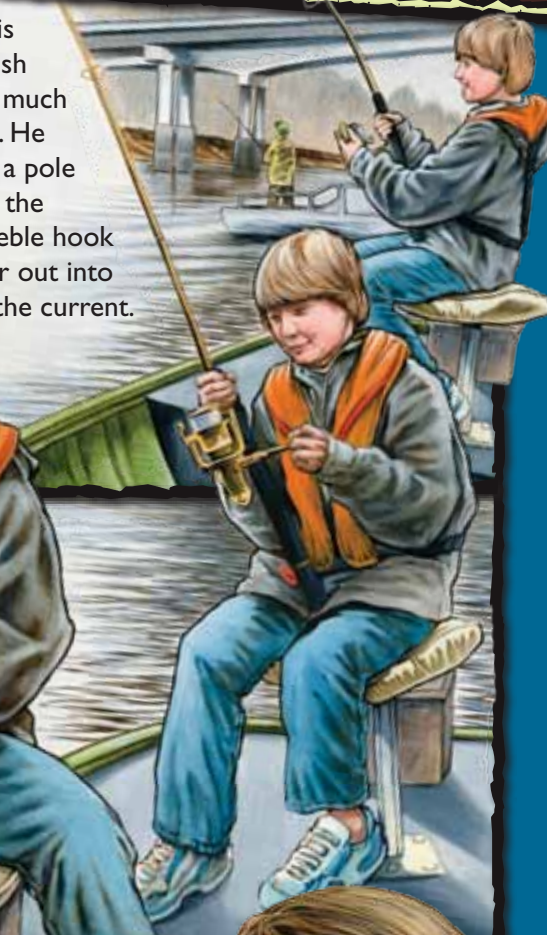
BY CEDAR LOHRAFF, AGE 12

ADVENTURE

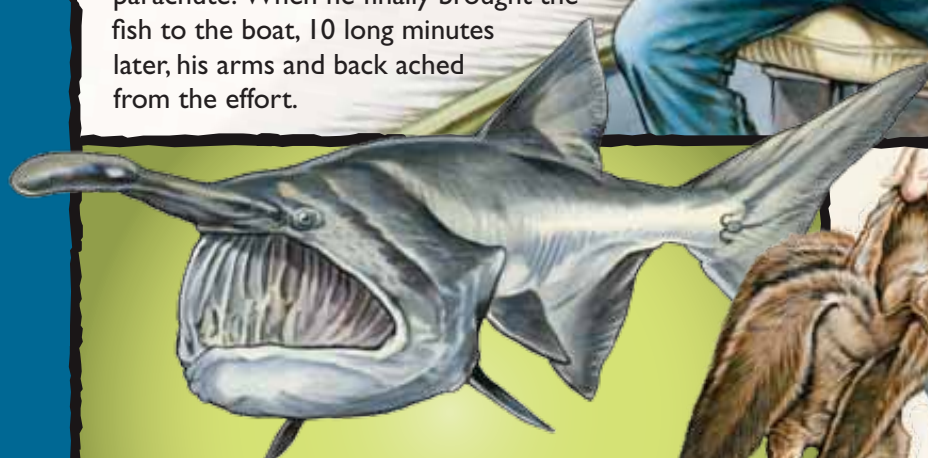


At first, Cedar was content to watch his dad and uncle snag paddlefish. Some of the fish being pulled into nearby boats looked bigger than him. He worried if he hooked one, it might drag him overboard.

Finally, his itch to fish was too much to resist. He grabbed a pole and cast the heavy treble hook far out into the current.



Cedar cast again and again. He was about to give up when he hooked something solid and heavy, like a refrigerator. Cedar was sure he'd snagged a root wad, so he handed the pole to his dad. "That's a paddlefish," said his dad as he returned the pole. "It's a big one." Cedar had hooked the monster by its tail, so every time he reeled, the fish's gill covers flared like a parachute. When he finally brought the fish to the boat, 10 long minutes later, his arms and back ached from the effort.



His dad and uncle both had to help muscle the paddlefish over the bow. It tipped the scales at 39 pounds and measured 61 inches from paddle to tail—a few inches taller than Cedar.



When he's not catching giant fish, Cedar likes to play soccer and hunt for squirrels, deer, turkeys and morel mushrooms.



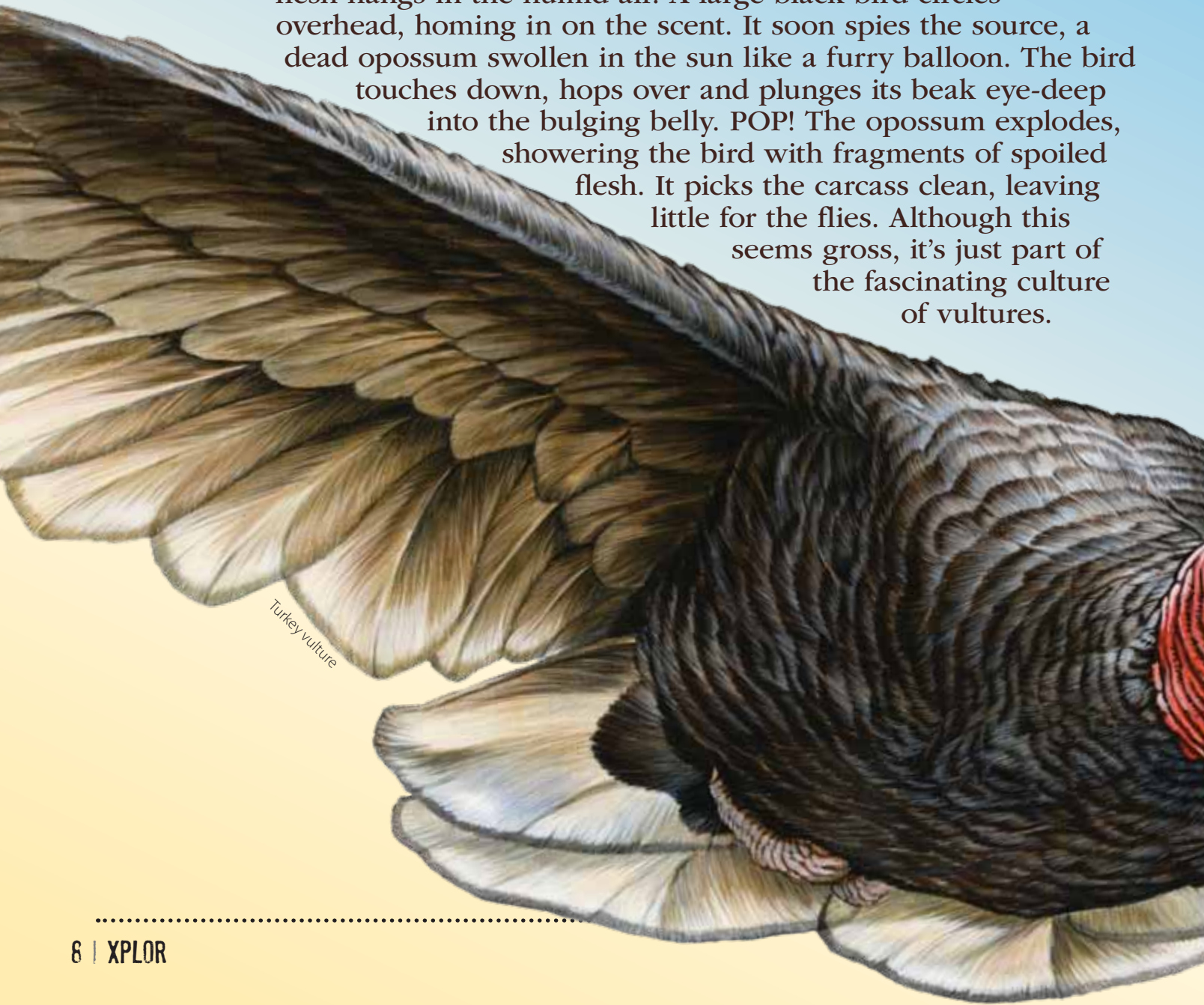
To snag a few paddlefishing pointers, visit www.mdc.mo.gov/node/3377.

Vulture Culture

by Matt Seek, illustrations by David Besenger



The sickly sweet smell of rotting flesh hangs in the humid air. A large black bird circles overhead, homing in on the scent. It soon spies the source, a dead opossum swollen in the sun like a furry balloon. The bird touches down, hops over and plunges its beak eye-deep into the bulging belly. POP! The opossum explodes, showering the bird with fragments of spoiled flesh. It picks the carcass clean, leaving little for the flies. Although this seems gross, it's just part of the fascinating culture of vultures.

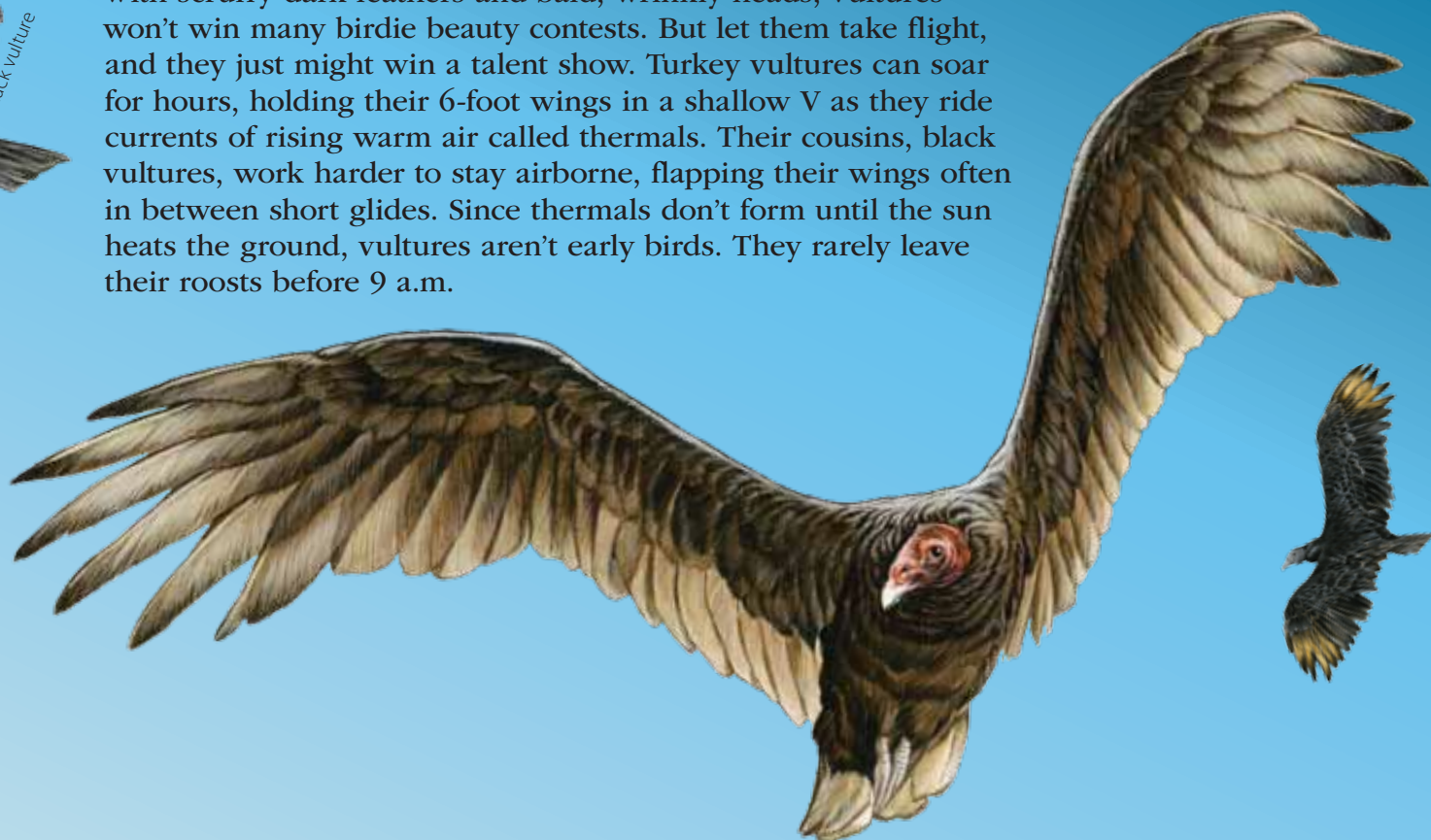


Turkey vulture

Ugly, Graceful Gliders

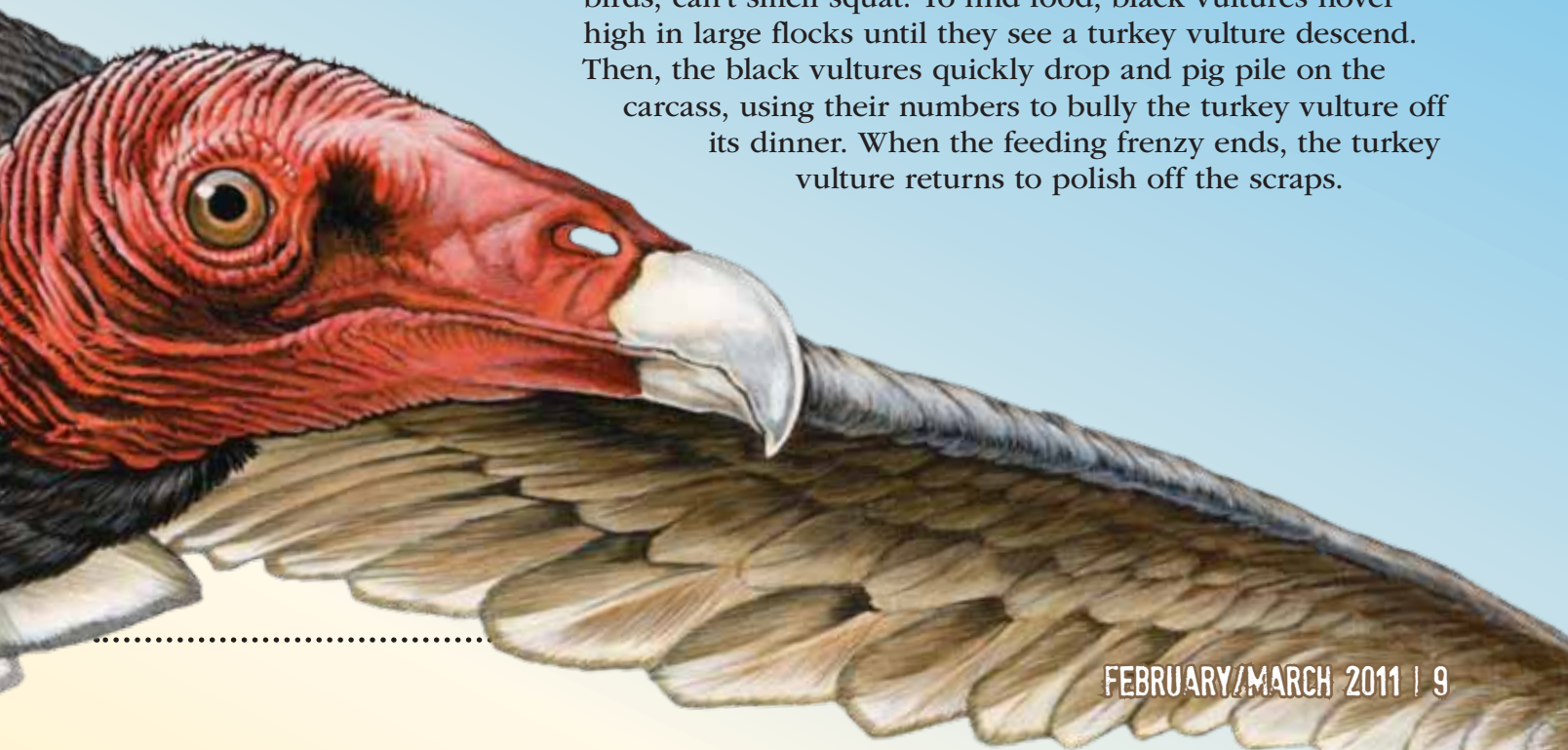
With scruffy dark feathers and bald, wrinkly heads, vultures won't win many birdie beauty contests. But let them take flight, and they just might win a talent show. Turkey vultures can soar for hours, holding their 6-foot wings in a shallow V as they ride currents of rising warm air called thermals. Their cousins, black vultures, work harder to stay airborne, flapping their wings often in between short glides. Since thermals don't form until the sun heats the ground, vultures aren't early birds. They rarely leave their roosts before 9 a.m.

Black vulture



Follow the Leader

Turkey vultures have super sniffers that they use to find decaying animals to dine on. Black vultures, like most birds, can't smell squat. To find food, black vultures hover high in large flocks until they see a turkey vulture descend. Then, the black vultures quickly drop and pig pile on the carcass, using their numbers to bully the turkey vulture off its dinner. When the feeding frenzy ends, the turkey vulture returns to polish off the scraps.



A Face Only a Mother Could Love

In spring, vulture couples search for a hollow stump, abandoned building or cave in which to raise a family. The pair doesn't bother building a nest. Instead, the female lays two creamy-white eggs on the bare ground. Both parents take turns sitting on the eggs until they hatch about a month later. The chicks are completely helpless at first but soon grow into bouncy balls of dingy-white fluff.

Turkey vulture chicks

Raccoon

BARF Bags

Forget creamed peas. Vultures feed their babies by throwing up chunks of partially digested meat. While their parents are away, vulture chicks fend for themselves. They hiss, stamp their feet and rush at intruders to scare them away. If any critter creeps too close, the chicks puke on them. The vile smell of this barf bomb is enough to send would-be predators packing.



Who's Up for a Sleepover?

Dozens, sometimes hundreds, of vultures spend the night roosting together in large trees. Vultures lack a voice box, so they can't sing or tweet. Instead, they chat with each other through hisses and grunts. Before taking flight the next morning, vultures warm up by spreading their long black wings to soak up sunshine. To cool down, they pee on their legs. This disgusting habit has an added benefit: Acid in the urine kills any bacteria clinging to the vulture's legs.



Nature's Cleanup Crew

Most critters would get a terrible tummy ache—or even die—from eating rotten meat, but not vultures. The acid in their stomachs is so strong, most germs can't survive a cruise through their guts. Vulture poop, in fact, is surprisingly disease-free. By eating spoiled meat, vultures keep diseases from spreading. Without vultures, the world would be much sicker—and stinkier!

something to Bugle About

Elk Return to the Show-Me State

by Brett Dufur


Through the dappled light of an Ozark forest, you catch a glimpse of majestic antlers. The creature moves through the trees and is gone, with the stealth of an animal a fraction of its size. Was it a deer? Not a chance, it was too big. Then you hear a powerful, drawn-out squeal—the unforgettable bugle of a bull elk calling to his cows.

Elk in Missouri? You bet. Elk lived throughout the Show-Me State long before early settlers showed up. They've been gone for about 150 years, mainly due to overhunting and habitat destruction. But fortunately for Missourians, elk will once again roam

the forested hills of southern Missouri starting this year.

A team of state and federal agencies and citizens are working together to bring a small herd of elk from Kentucky, where they were introduced and now thrive. The elk will be moved to a restoration zone in and around the Peck Ranch Conservation Area in a remote part of the Ozarks.

The Conservation Department will manage the elk's return. Bringing back native wildlife is part of MDC's job. It has successfully brought back deer, turkey and many other types of wildlife. In case you think elk are just super-sized deer, think again. Elk are not only unique, they are truly amazing!

A male elk with large, dark brown antlers stands in a forest. The elk is facing the camera with its mouth open, showing its teeth. The background is a blurred forest with green and brown foliage. A tree trunk is visible on the left side of the frame.

Once, more than 10 million elk roamed nearly all of the United States and parts of Canada.

Herd How-To

Male elk are called bulls, females are called cows, and young are calves. While newborns are only about 35 pounds, males weigh 600 to 800 pounds when mature. Cows, calves and yearlings live in herds of up to 50 members. Bulls live in smaller bachelor groups or travel alone. Males join female herds during the mating season, called the rut. After a bull has selected a group of females, it is called a harem.

Noisy Neighbors

Elk are a chatty bunch. Bulls may bugle to attract cows or to advertise their dominance to other bulls. They grunt at cows that stray from their harem. Cows bark to warn of danger, mew to keep track of each other, and whine softly to signal to their calves. Calves in distress bleat for their mothers. Elk have “knuckles” in their feet that make clicking sounds with every step. This helps them track each other in the dark, because each animal makes its own distinct click. Hear an elk’s bugle at www.xplormo.org/node/11280.

Hair Today, Gone Tomorrow

Each year, elk grow two different coats of fur. For winter, they grow thick manes to warm their necks. Their bodies are insulated by thick underfur that acts like your heavy winter coat. Long, waterproof guard hairs on top keep them dry. Each spring, they shed, or molt, this heavy layer, and grow shorter, thinner hair for summer. This is why elk sometimes have old fur hanging in tattered strips in the spring.



Elk are also called wapiti, a Native American word that means white rump.

Soft Like Velvet, Tough Like Trees

Spring is when antlers grow fastest. During this time, they are covered in a velvet case, and infused with blood, much like a bone in your leg. As the season progresses, the velvet drops off. Bulls scrape the remaining velvet off by rubbing their racks on trees.

By then, their antlers are super tough. When two bulls decide to battle, antlers are serious weapons. Most often bulls lock antlers and shove each other around until one turns and runs. Despite all that work to grow them, antlers are shed, or dropped, each year.



The Rack is Back

Elk antlers are a story all their own. An elk's rack is much larger than a deer's. It can weigh up to 40 pounds. Antlers are the fastest growing bones in nature, adding up to an inch a week! It takes lots of energy to grow a big rack, but it's worth it. A big rack signals to cows that a bull knows where to find food, which is what herd survival is all about. A large rack is also used to do battle with other bulls to gain control of the herd.



Only male elk have antlers. In the summer, a bull elk's antlers act as air conditioners. Blood flowing through the velvet covering helps to cool the bull's body.

Strength in Numbers



Elk are social animals and find safety in numbers. After all, 50 sets of eyes and ears are better than one. One elk is always on the lookout for predators while others feed or snooze. Other times, one cow will babysit all of the new calves while the other cows go off to graze.

Ivory—Elk's Hidden Treasure

Buglers, whistlers, tusks, ivories—regardless of what you call them, an elk's top two canine teeth are possibly remnants of saber-like tusks from their prehistoric ancestors. They are made of the same ivory as elephant and walrus tusks. As elk evolved and their racks grew larger, their teeth shrank to their present length—about the size of your thumb. When an elk sneers and exposes its canines, it means business. Elk ivories were prized by Native Americans, who used them as currency and as a display of success. Modern hunters still treasure these special teeth.

Four Stomachs to Fill

If your stomach has ever been empty, then imagine you weigh 600 pounds and have FOUR stomachs to fill! Elk need to eat up to 15 pounds of plant parts a day. Elk eat grasses, plants, leaves, bark, twigs and acorns. Their long necks help them reach tasty leaves. They eat morning, noon and night, and never miss a midnight snack. If you ate as much as an elk, you'd only have 10 minutes an hour to do anything else.



XPLOR MOOR

TIME TO BUILD A BLUEBIRD HOUSE



HOME TWEET HOME

What's red, white and blue, eats bugs, and sings in the spring? It's Missouri's state bird, the eastern bluebird. In early March, bluebirds search for hollow trees or abandoned woodpecker holes in which to nest. Even if your yard lacks these natural cavities, you can still have bluebirds. Just build a bluebird box.

1. Ask an adult for help.
2. Gather materials. You'll need a board 5 feet long, 6 inches wide and 1 inch thick, plus some nails or screws. Cedar lumber is best, but other types of wood can be used. Avoid treated lumber because the chemicals are toxic to birds.
3. Round up some tools. You'll need safety glasses, a tape measure, a saw, and a hammer or screwdriver.
4. Follow the bluebird box plans at www.xplormo.org/node/2937.

LOCATION, LOCATION, LOCATION

Bluebirds are picky about where they nest. Here's how to persuade a pair to use your box.

- Put your box up before March.
- Select an open, grassy area with scattered trees such as a backyard or pasture. Avoid brushy areas unless you want house wrens in your bluebird box.
- Hang your box 4 to 6 feet high on a post. Face the box toward a tree or shrub. Bluebirds will hang out there to watch for insects to pounce upon.
- Space boxes at least 125 yards apart. Bluebirds need plenty of room to find food for themselves and their babies.



SPRING CLEANING

Keep your bluebird family happy by checking your box often and keeping it tidy.

- Inspect your box every February. Repair or repaint it if necessary, and clean out any old nests inside.
- In March, begin checking your bluebird box once a week. Bluebirds lay 2 to 7 pale blue eggs in a tidy, cup-shaped nest of woven grass. Starlings and house sparrows build messy nests using many different materials. Remove sparrow and starling nests. Your box is for bluebirds!
- Once a bluebird pair begins nesting, you can peek in on the family until the babies are 13 days old. After that, leave the box alone so the young aren't spooked into leaving the nest too early.
- Clean out old nests as soon as the young leave. Chances are good that the bluebird parents will nest a second or even third time!

ANSWER TO

WHAT IS IT?

FROM PAGE 6

From March to April, male prairie-chickens make low-pitched cooing noises to attract mates. The sound, called booming, can be heard a mile away. Males also strut their stuff by inflating bright orange air sacs on their necks, lifting long feathers behind their heads, and stamping their feet. For the record, prairie-chickens aren't chicken. Males often fight each other to get a girl.



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FREE TO MISSOURI HOUSEHOLDS

NORTHERN SPRING PEEPER



Not another peep from you, mister! Male spring peepers sing to attract females by filling and deflating balloon-like pouches on their throats. Although the pouches can swell bigger than their heads, no peeper has ever popped. The loud, chirping chorus of these thumb-sized frogs is among the first signs of spring.